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ABSTRACT

The purpose of this study was to test the implication that ethnic stereotyping may bias a teacher's perception of a child's speech. The subjects, 44 undergraduate education majors, were asked to view three 90-second segments of video tape showing fifth and sixth grade boys from three ethnic groups--Black, Mexican-American, and Anglo--and were asked to complete a rating instrument made up of a set of semantic differential scales designed to judge a child's speech in terms of "confidence-eagerness" or "ethnicity-nonstandardness." The video tapes were produced in such a manner that it was possible to substitute the speech of one child for another. Each subject was shown a segment of an Anglo child speaking standard English, a segment of a Black or Mexican-American child speaking the standard English of an Anglo child (dubbed in), and a segment of a Black or Mexican-American child speaking his own dialect. Findings indicated that visual clues of ethnicity did bias the subjects' evaluations of standard English speech samples. Black and Mexican-American children shown with audio dubs of standard English were judged to be less confident and eager and more ethnic and nonstandard than the Anglo children speaking standard English. (See also ED 042 756-ED 042 758.) (JM)

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EFFECTS OF VISUAL CUES OF ETHNICITY UPON SPEECH RATINGS

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PURPOSE

Previous research (Williams, Whitehead, and Traupmann, 1970c) indicated a relation between teachers' ratings of speech imagined for written stereotypes of children and teachers' ratings of the videotaped speech of children who might fit those stereotypes. These findings suggested the presence of an ethnic stereotyping behavior on the part of teachers which may bias their perception of a child's speech. In the present research this implication was tested by pairing the same standard English speech recordings with videotapes of children from Anglo, Black, and Mexican-American families. Teachers' ratings of the speech samples were then assessed for variation due to the ethnicity of the child whom they were led to believe was doing the speaking. By also obtaining ratings of types of children, it was possible to see how stereotyping was related to biases when rating children from different ethnic groups.

METHOD

Subjects

Ss were 44 undergraduate education majors (42 female, 2 male) enrolled in a speech course for prospective elementary teachers.

Materials

Stimulus tapes. Fifth and sixth grade male children representative of three ethnic groups--Black, Mexican-American, and Anglo--from the Austin, Texas area were videotaped while in the process of assembling a plastic model car. Each child was asked to describe what he was doing or what he intended to do with his new car. A sound recording was made of each child's verbal response. From the black-and-white videotapes, a 90-second segment of a child of each

ethnicity was reproduced. Similarly, 90-second audio segments were reproduced of two Anglo children, one Black child, and one Mexican-American child. Slight lip movement in the video segments was detectable, but was insufficient for lip-reading on the part of the teacher-evaluators. In a testing design, teachers used a 15-scale semantic differential for rating videotapes of a Black child, a Mexican-American child, and an Anglo child. The video image of the Anglo child was always paired with the audio dub of an Anglo child speaking standard English. However, teachers also heard one of two Anglo tapes (necessary for the testing design) paired with the visual image of either a Mexican-American or a Black child. Eventually it was possible to make direct comparisons of the ratings of standard English passages as they were paired with an Anglo child, a Mexican-American child, or a Black child.

Response Instrument. A set of semantic differential scales developed in previous research (Williams, Whitehead, and Traupmann, 1970a) was used as the rating instrument. These scales are listed in Table 1. Based upon the aforementioned research, scales 1-5 are known indices of the confidence-eagerness dimension of a judgmental model, while scales 6-10 represent an ethnicity-nonstandardness dimension. Scales 11-15 were used as filler items. Scale quantification was undertaken by assigning a one to seven value beginning with the adjective for each scale indicated in Table 1. After factor analyses substantiated the presence of the two judgmental dimemsions, factor scores were calculated as the sum of scales 1-5 for confidence-eagerness, and 6-10 for ethnicity-nonstandardness.

Procedure

Two weeks prior to the videotape presentation, Ss completed a pretest response booklet consisting of (1) an explanation of the session under the guise of a two-part experiment designed to determine the correspondence of teachers' evaluations of children's speech with the prediction made by a standardized test battery of the child's intellectual ability; (2) instruction regarding the completion of the semantic differential; and (3) three evaluation forms requesting imagined ratings of a "Black child," "Anglo child," and "Mexican-American child."

For the videotape ratings, Ss were tested in groups of five or six persons in a small conference-type room, utilizing an 11-inch television monitor. Each group viewed (1) a Black or Mexican-American child whose nonstandard speech had been replaced by dubbing-in the speech of a standard English speaking child, (2) a Black or Mexican-American child speaking nonstandard English, and (3) an Anglo child speaking standard English. Teachers saw either the Black or Mexican-American child in the standard English version, but not both.

Data Analysis

Two types of analysis procedures were employed in the current study. First, to test whether the scale usages reflected the two dimensional model found in prior research, two factor analyses of the responses were performed. One was for scale usage with the label stimuli, the other was for usage with the videotape stimuli. In both, unities were placed in the diagonals of the correlation matrix, and factors with latent roots greater than one were rotated according to Varimax criteria. Second, to test for effects of the

different ethnicity conditions, the data for each factor were subjected to two-by-three analyses of variance. Dimensions corresponded to the three ethnicity conditions and the two standard English speech samples which had been used. Dependent variables for the above analyses of variance consisted of summation scores for Factor I, confidence-eagerness and Factor II, ethnicity-nonstandardness.

RESULTS

Judgmental Dimensions

Label Judgments. Results of the factor analysis of scales used in judging labels are presented in Table 2. The ethnicity-nonstandardness factor was dominant, accounting for 33% of the total variance, while the confidence-eagerness factor accounted for 28%. In short the usual two dimensional model was found.

Videotape Judgments. The second factor analysis results are shown in Table 3. Here a larger portion of the total variance is accounted for by the two-factor model, with the factor of confidence-eagerness accounting for 37% of the variance and ethnicity-nonstandardness for 31%. Again, the two dimensional model was found to obtain.

Stimulus Differentiation

Confidence-Eagerness Ratings. The analysis of variance of the dependent variable of confidence-eagerness revealed a significant main effect on the ethnicity variable, $F(2,82)=9.52$, $p<.001$, and a significant main effect for the two different standard English passages used as stimuli, $F(1,82)=11.62$, $p<.001$. There was no significant interaction.

Results of comparisons among the means of the three levels of the ethnic factor revealed that Mexican-American children were rated lower on confidence-eagerness than were Anglos or Blacks whose ratings were not significantly different from each other. The confidence-eagerness means (different alphabetical subscripts indicate significant differences at the $p<.05$ level) were:

Anglo = 23.1^{a}

Black = 22.2^{a}

M.-Am. = 18.7^{b}

Differences on the language sample variable indicated that one Anglo tape was generally rated higher (22.8) than the other (19.8). This difference had generality across the three ethnic categories (hence, the lack of a significant interaction).

Ethnicity-Nonstandardness Ratings. Results of the analysis of variance of ethnicity-nonstandardness ratings revealed a significant main effect on the ethnicity dimension, $F(2,82)=31.8$, $p<.001$. No significant effects due to the two Anglo tapes nor an interaction were found.

Results of individual comparisons of the ethnic factor means indicated that Mexican-American and Black children were rated as more ethnic-nonstandard than the Anglos. The pertinent means (different alphabetical subscripts indicate significant, $p<.05$ differences) were:

Anglo = 30.1^{a}

Black = 21.8^{b}

M.-Am. = 21.3^{b}

Generalizations. In all, the findings indicated that the visual cues of ethnicity did bias teachers' evaluations of the same standard English language samples. This was in the direction of rating the Mexican-American child as being less confident and eager than the Black and Anglo children, and rating the Black and Mexican-American children as more ethnic-nonstandard than the Anglo child.

Stereotyping

Although the directions of the above biases seemed compatible with prior research in this area (Williams, Whitehead, and Traupmann, 1970a,b,c,), the interpretation that they were a function of stereotyping behavior on the part of the teachers was more an implication than a conclusion of this phase of the research. There was, however, a way to seek further support for this implication. This was done by considering the teachers' ratings of the children imagined for labels as a stereotyped response, then examining the degree to which variations in these stereotypes could be related to biases in rating the standard English samples as they were paired with the Black and Mexican-American children.

For each teacher-evaluator a difference score was calculated for confidence-eagerness and ethnicity-nonstandardness between ratings of the child imagined for the Anglo label and the children imagined for the Black and Mexican-American labels. These difference scores were assumed to constitute measures of stereotyping variation that the evaluators held for the three ethnic groups. The statistical question then was the degree to which these variations would predict the ratings of the Black and the Mexican-American children

whose dubbed speech was standard English.[1] The correlations associated with four regression equations of the videotaped ratings upon the stereotype variations are summarized as follows:

	Black	Mexican-American
confidence-eagerness	-.01	-.46
ethnicity-nonstandardness	-.42	-.31

The above coefficients suggest that a small but reliable[2] relation exists between the stereotype biases and the ratings of ethnicity-nonstandardness for Black children and confidence-eagerness for Mexican-American children. Although the correlation was less, the same interpretation could tentatively be advanced for rating of ethnicity-nonstandardness of the Mexican-American children. No relation was found for predicting confidence-eagerness ratings of the Black children. This latter finding could be expected since it was found earlier that there were no significant differences on

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[1]Presumably the prediction of difference scores between the ratings of the videotapes of the Anglo and Black children or the Anglo and Mexican-American children would be a more precise answer to the question. However, in the present testing design a given teacher's rating of the Anglo videotape and the minority group child with dubbed speech necessarily involved the use of different Anglo speech samples. Because some differences were found between these two samples it was reasoned that prediction of this type of difference score might be hampered by an additional source of variance.

[2]Because each teacher only saw one of two minority group children with a dubbed standard English audio tape, the number of replicates in the regression analyses was 22 rather than the total of 44 teachers. For d.f. = 20, a correlation coefficient of .42 or greater could be interpreted as grounds to reject the null hypotheses that the correlation equaled zero. Negative coefficients were expected since generally the greater the difference in ratings between the Anglo and minority group children (as labeled), the lower the rating on the two judgmental dimensions when rating videotapes.

the confidence-eagerness dimension between the Anglo and Black children's videotapes.

In sum, visual cues of ethnicity did affect ratings of standard English speech samples, and to some degree this variation could be associated with stereotyping on the part of the teacher-evaluators.

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TABLE 1. Scales used to index the two-factor model and fillers.

1. THE CHILD SEEMS: *unsure--confident
2. THE CHILD IS: active--passive*
3. THE CHILD SEEMS: *reticent--eager
4. THE CHILD SEEMS: *hesitant--eager
5. THE CHILD SEEMS TO: like--dislike talking*
6. THE LANGUAGE OF THE CHILD'S HOME IS PROBABLY: standard American--marked ethnic style*
7. THE CHILD SOUNDS: Anglo-like--non-Anglo like*
8. THE CHILD'S HOME LIFE IS PROBABLY: like--unlike yours*
9. THE CHILD'S FAMILY IS PROBABLY: *low--high social status
10. THE CHILD SEEMS CULTURALLY: *disadvantaged--advantaged
11. THE CHILD SEEMS: intelligent--unintelligent*
12. THE CHILD PROBABLY SPENDS: *little--much time away from home
13. THE CHILD SEEMS TO BE: *sad--happy
14. THE CHILD IS: determined--not determined in school*
15. THE CHILD SEEMS: *non-competitive--competitive

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*The asterisks define the pole of the scale assigned a value of 1.0 in the quantification scheme; the asterisks did not appear on the actual instrument.

TABLE 2. Rotated factor matrix of teachers' responses to ethnicity labels.

Variables	Factors* I	II
1. unsure	.57	.53
2. passive	.12	.77
3. reticent	.19	.77
4. hesitant	.32	.79
5. dislike talking	.21	.70
6. lang. marked ethnic style	.75	.36
7. non-Anglo like	.79	.28
8. home life unlike yours	.89	.19
9. low social status	.88	.24
10. disadvantaged	.86	.27
(Percentage of total variance	33%	28%

*Factor I = ethnicity-nonstandardness

Factor II = confidence-eagerness

TABLE 3. Rotated factor matrix of teachers' responses to stimuli.

Variables	Factors* I	II
1. unsure	.65	.37
2. passive	.80	.28
3. reticent	.89	.18
4. hesitant	.82	.30
5. dislike talking	.84	.23
6. lang. marked ethnic style	.25	.86
7. non-Anglo like	.25	.86
8. home life unlike yours	.37	.78
9. low social status	.35	.79
10. disadvantaged	.38	.83
(Percentage of total variance)	37%	31%

*Factor I = confidence-eagerness

Factor II = ethnicity-nonstandardness